## REMARKS

In light of the following remarks, reconsideration of the present application is respectfully requested. Claims 1-3, 6, 8-15, 17-18 and 21-23 are pending. Claim 15 is amended to correct a typographical error and not in any manner directed to patentability.

## Information Disclosure Statements

Applicants appreciate the Examiner's consideration of the references cited in the Information Disclosure Statement filed on March 27, 2006 and June 17, 2009.

## Rejections under 35 U.S.C. § 103[1]

**1.** Claims 15, 22, 1-3, 9-10 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer et al. (US 6,556,695), hereinafter "Packer," in view of Leiper (US 6,128,002). Applicants traverse this rejection.

Claim 15 requires, inter alia, a registration module designed for automatic correlation "of the <u>electroanatomical 3D mapping data</u> and the selected 3D image data." At least this feature is not disclosed or suggested by Packer, Leiper or a combination of the two (assuming they could be properly combined, which Applicants do not admit).

Packer discloses a method for producing high resolution real-time images. The method includes registering a high resolution model with an acquired real-time low resolution image. As disclosed in col. 9, lines 55-65,

> The selected high resolution image is then registered with the current real-time image frame as indicated at process block 236. The preferred method for registering the two image data sets is described

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[1] To be thorough, further expedite prosecution, and for the sake of clarity, Applicants provide discussions of each of the references separately, however, Applicants are <u>not</u> <u>attacking these references individually</u>, but arguing that the references, even taken in combination, fail to render the claimed invention obvious because all features of the claims are not found in the prior art.

in U.S. Pat. No. 5,568,384 which issued on Oct. 22, 1996 and is entitled "Biomedical Imaging And Analysis", and which is hereby incorporated by reference. As described in more detail therein, this is an iterative process in which a match image (the stored 4D model) is translated, rotated and scaled to provide the best registration possible with a base image (the real-time image frame).

The low resolution image is based on ultrasonic image data.[2]

The Examiner relies on the above-recited portion of Packer to teach the correlation "of the electroanatomical 3D mapping data and the selected 3D image data" of claim 15.[3] However, the ultrasonic image data, which is registered with the selected high resolution image, is not electroanatomical data. Accordingly, Packer fails to disclose or suggest the registration module designed for automatic correlation "of the electroanatomical 3D mapping data and the selected 3D image data," of claim 15. By contrast, Packer discloses registering ultrasonic images with high resolution images.[4]

Even assuming for the sake of argument that Packer and Leiper could be properly combined (which Applicants do not admit), Leiper fails to cure the above-discussed deficiencies of Packer. Therefore, claim 15 is not rendered obvious by Packer and Leiper. Claim 22, which is dependent on claim 15, is patentable for at least the reasons set forth above.

Claim 1 is a separate independent claim from claim 15, wherein claim 1 contains its own individual limitations. Each independent claim should be interpreted solely based upon limitations set forth therein. However, claim 1 is patentable for at least reasons somewhat similar to those set forth above regarding claim 15. Claims 2-3, 9-10 and 14 are patentable based at least on their dependency on claim 1.

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[2] Col. 8, lines 22-27 of Packer.
[3] Final Office Action, U.S. Appl. No. 10/569,957, U.S. Pat. and Trademark Office, p. 9 (September 4, 2009).
[4] Col. 12, lines 52-61 of Packer.

Therefore, Applicants respectfully request that the rejections of claims 15, 22, 1-3, 9-10 and 14 under 35 U.S.C. § 103 be withdrawn.

**2.** Claims 17-18, 21, and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Hemler et al. (A System for Multimodality Image Fusion), hereinafter "Hemler," and further in view of Williams et al. (DE 19953308-A1), hereinafter "Williams."

The Examiner correctly acknowledges that the features of claims 17-18, 21, and 6 are absent from Packer, but alleges that these features are taught by Hemler and Williams, thereby rendering claims 17-18, 21, and 6 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claims 17-18, 21, and 6 are taught by Hemler and Williams (which Applicants do not admit) and that Hemler and Williams could be properly combined with Packer (which Applicants do not admit), Packer, Hemler and Williams are still deficient with respect to the above-described features of claims 15 and 1. Thus, even in combination, Packer, Hemler and Williams fail to render claims 17-18, 21, and 6 obvious.

Therefore, Applicants respectfully request that the rejections of claims 17-18, 21, and 6 under 35 U.S.C. § 103 be withdrawn.

**3.** Claims 23 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Hughes et al. (US 7,233,340), hereinafter "Hughes."

The Examiner correctly acknowledges that the features of claims 23 and 13 are absent from Packer and Leiper, but alleges that these features are taught by Hughes, thereby rendering claims 23 and 13 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claims 23 and

13 are taught by Hughes (which Applicants do not admit) and that Hughes could be properly combined with Packer and Leiper (which Applicants do not admit), Packer, Leiper and Hughes are still deficient with respect to the above-described features of claims 15 and 1. Thus, even in combination, Packer, Leiper and Hughes fail to render claims 23 and 13 obvious.

Therefore, Applicants respectfully request that the rejections of claims 23 and 13 under 35 U.S.C. § 103 be withdrawn.

**4.** Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Schweikard et al. (US 6,144,875), hereinafter "Schweikard."

The Examiner correctly acknowledges that the features of claim 8 are absent from Packer and Leiper, but alleges that these features are taught by Schweikard, thereby rendering claim 8 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 8 are taught by Schweikard (which Applicants do not admit) and that Schweikard could be properly combined with Packer and Leiper (which Applicants do not admit), Packer, Leiper and Schweikard are still deficient with respect to the above-described features of claim 1. Thus, even in combination, Packer, Leiper and Schweikard fail to render claim 8 obvious.

Therefore, Applicants respectfully request that the rejection of claim 8 under 35 U.S.C. § 103 be withdrawn.

**5.** Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Krishnan (US 6,771,262).

The Examiner correctly acknowledges that the features of claim 11 are absent from Packer and Leiper, but alleges that these features are taught by

Krishnan, thereby rendering claim 11 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 11 are taught by Krishnan (which Applicants do not admit) and that Krishnan could be properly combined with Packer and Leiper (which Applicants do not admit), Packer, Leiper and Krishnan are still deficient with respect to the above-described features of claim 1. Thus, even in combination, Packer, Leiper and Krishnan fail to render claim 11 obvious.

Therefore, Applicants respectfully request that the rejection of claim 11 under 35 U.S.C. § 103 be withdrawn.

**6.** Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer et al. in view of Leiper and further in view of Massaro et al. (US 2002/0087329), hereinafter "Massaro."

The Examiner correctly acknowledges that the features of claim 12 are absent from Packer and Leiper, but alleges that these features are taught by Massaro, thereby rendering claim 12 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 12 are taught by Massaro (which Applicants do not admit) and that Massaro could be properly combined with Packer and Leiper (which Applicants do not admit), Packer, Leiper and Massaro are still deficient with respect to the above-described features of claim 1. Thus, even in combination, Packer, Leiper and Massaro fail to render claim 12 obvious.

Therefore, Applicants respectfully request that the rejection of claim 12 U.S.C. § 103 be withdrawn.

## CONCLUSION

In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By

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